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EXAMINER

JOLLEY, KIRSTEN

ART UNIT PAPER NUMBER

1762

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/721,636

Applicant(s)

SUH ET AL.

Examiner

Kirsten C. Jolley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 1-6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/22/05, 11/24/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group II, claims 7-14, in the reply filed on May 5, 2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Objections

2. Claims 9 and 13 are objected to because of the following informalities: In line 3 of claims 9 and 13, it appears that "CO" should be —Co—. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 7-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 7 and 11, line 7 of each, the phrase "big magnetic anisotropy" is vague and indefinite because "big" is a relative term of degree, and therefore the metes and bounds of the claims are not known. The specification does not appear to define the limits of "big magnetic anisotropy."

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 7-9 and 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirokane et al. (US 5,863,649).

Hirokane et al. discloses a method for fabricating a magneto-optical storage medium comprising the steps of: forming a sublayer (reading-out layer 3) of GdFeCo which contains a transition metal (Fe); forming a recording layer 5 on which information is recorded and stored; and recording on the medium which includes a thermal treatment such that a crystalline structure of the sublayer is changed into a crystalline structure that has a big magnetic anisotropy so that a magnetic anisotropy energy of the sublayer is coupled to the recording layer. Hirokane et al. discloses use of a high temperature to change the magnetization of the sublayer/reading-out layer in col. 4, lines 43-60, col. 7, line 67 to col. 8, line 2, col. 10, lines 42-46, and col. 11, lines 40-44; such a change in magnetization results from a change in crystalline structure of the layer. As to claims 8-9 and 12-13, Hirokane et al. teaches that the recording layer 5 may be TbFeCo (col. 13, lines 1-3). In this case, the sublayer (reading-out layer 3) is made up of an alloy containing a transition metal used for the recording layer.

Allowable Subject Matter

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7. Claims 10 and 14 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The prior art does not teach or fairly suggest a method of fabricating a magneto-optical storage medium as claimed in claims 7 and 11 whereby the recording layer is made up to TbFeCo and the sublayer is made up of FePt. Hirokane et al. does not teach or suggest substituting its reading out layer for one made up of FePt. While Sellmyer et al. (US 5,824,409) and Sellmyer et al. (US 2001/0036562) disclose the formation of FePt films which are subsequently annealed to have very high anisotropy, there is no teaching of suggestion to incorporate the films of the Sellmyer et al. references into the Hirokane et al. reference.

Conclusion


8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sellmyer et al. (US 5,824,409), Sellmyer et al. (US 2001/0036562), Visokay et al. (US 5,603,766), Nishimura (US 5,663,935), and Kim (US 6,780,291) are cited to demonstrate the state of the art with respect to the instant invention.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kirsten C. Jolley whose telephone number is 571-272-1421. The examiner can normally be reached on Monday to Thursday and every other Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Kirsten C Jolley
Primary Examiner
Art Unit 1762

kcj